

ACES Model Composition and Development Toolkit to Support NGATS Concepts, Phase I

Completed Technology Project (2007 - 2007)



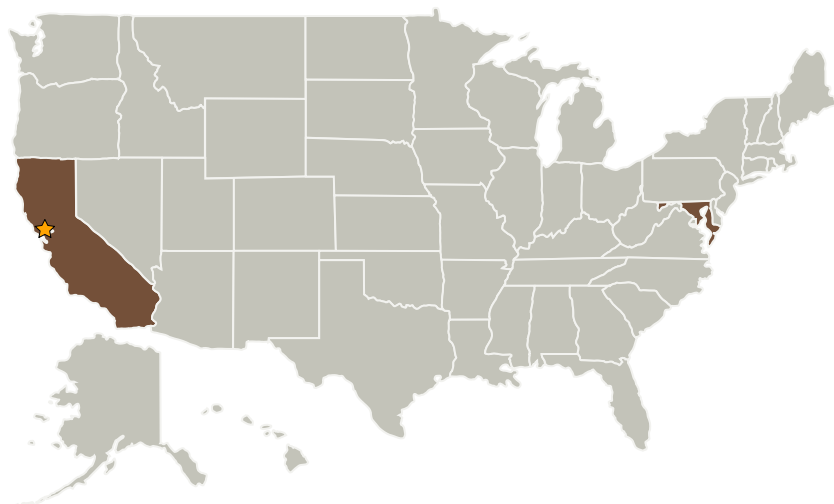
Project Introduction

The key innovation proposed in this effort is the development of a model composition toolkit that will enable NASA Airspace Concept Evaluation System (ACES) users to design and compose agents, activities, and models to meet specific design requirements. Our technical approach builds on recent advances in formal agent specification, role composition and model composers. The toolkit will allow end-users to use a graphical editor and templates/property sheets to load, create, configure and interconnect agents, activities and domain models.. In addition to composing agent and models, a key feature provided by this toolkit is a family of "physical language specific adaptors" that will allow users to import domain models written Matlab

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. The toolkit will also provide capabilities to export ACED LDC data to tools such as Matlab for post analysis and graphing. The primary focus of the Phase I effort will focus on demonstrating the feasibility and capability of this toolkit for the ACES Terminal Area Plant. We propose to demonstrate this capability by developing showing how an end-user, not experienced with Java, can easily add a C2 agent to perform runway balancing and replace the current timer-based Terminal Area Link transit models with 4-D trajectory models.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Intelligent Automation, Inc.	Supporting Organization	Industry	Rockville, Maryland

Primary U.S. Work Locations

California	Maryland
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
 - └ TX11.4 Information Processing
 - └ TX11.4.4 Collaborative Science and Engineering